

UNIVERSIDADE DE LISBOA  
FACULDADE DE PSICOLOGIA



**THE RELATIONSHIPS OF DISPOSITIONAL ATRIBUTES  
WITH SAFETY PERFORMANCE AND  
COUNTERPRODUCTIVE WORK BEHAVIORS**

**Duarte Belchior Burnay Bastos**

**MESTRADO INTEGRADO EM PSICOLOGIA**

**Secção de Psicologia dos Recursos Humanos, do Trabalho e das Organizações**

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**Dissertação de Mestrado orientada pela Professora Doutora Maria Isabel Paredes**

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## **Abstract**

Although research has often shown relationships between counterproductive and safety-related behavior at the workplace and personality traits of the Big Five, organizations use instruments based on different models of personality. In this study the Work Styles Questionnaire (version n) was used to assess possible relationships with dependability and safety-related behavior. The results showed a significant and positive relationship for the Dependable and Socially Confident scales, and a significant and negative relationship for the Innovative and Achieving scales.

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## **Preface**

This study aims to review some of the literature on the relationships of counterproductive and safety-related behavior at the workplace with personality traits, and to investigate how these relationships translate when a different model of personality, specifically designed for professional settings, is used. For this purpose, the introduction will first go over the concepts of counterproductive work behavior and safety performance, their impact to society and an overview of the research on their relationships with traits from the Big Five. Afterwards, the study will expound on the methodology, hypotheses and, subsequently, exhibit and discuss the results obtained.

## **Introduction**

In line with the assumption that people are diverse, some dispositional attributes could be linked to safety performance and counterproductive work behavior (CWB). Research has demonstrated this relationship (e.g. Cellar, Nelson, Yorke, & Bauer, 2001; Clarke & Robertson, 2008). However, there is a lack of clarity in the topic of safety performance and counterproductive work behavior. This dissertation aims to review the aforementioned relationship of dispositional attributes with safety performance and counterproductive work behavior and provide a brief overview of the origins and development of both concepts through the scientific literature.

According to the American Psychological Association ([apa.org/personality](http://apa.org/personality), n.d.), “personality refers to individual differences in characteristic patterns of thinking, feeling and behaving”. Personality will be approached through the dispositional theory, i.e. as a set of habitual patterns of behavior, thought and emotion (Kassin, 2003).

Counterproductive work behavior is any employee behavior that goes against the legitimate interests of their organization (Sackett, Berry, Wiemann, & Laczo, 2006). Spector and Fox (2005) consider them to be any volitional behaviors that harm or are intended to harm organizations or people in organizations. This type of behavior has also been conceptualized as deviance (Hollinger, 1986; Robinson & Bennett, 1995), antisocial behavior (Giacalone, Riordon, & Rosenfeld, 1997), unruliness (Hunt, 1996), and destructive or hazardous behaviors (Murphy, 1993). CWBs can range in magnitude from minor (e.g., taking an extended lunch break) to more serious (e.g., being verbally abusive toward a coworker). Although minor behaviors are considered relatively harmless, they still can negatively impact organizational effectiveness (Sackett, 2002).

Counterproductive work behavior can be extremely detrimental to organizations and to the economy. In the United States, different studies show that between 35% and 75% of employees have reportedly stolen from their employer (Boye & Wasserman, 1996; McGurn, 1988). Case (2000) estimates that up to 95% of organizations are targets of employee theft and fraud. Moreover, counterproductive work behaviors represent over \$50 thousand million losses for the American economy each year (Boye & Wasserman, 1996), and why almost a third of businesses fail (Moretti, 1986).

A more specific area within counterproductive behavior at work is related with safety-related behavior. It has long been a topic of interest to understand how personality is associated with accidents, usually through unsafe behavior. Accidents in the workplace are indeed still a persisting problem for not only those directly involved in the accidents but for organizations as well. While it is true the number of fatal injuries from job accidents per year has been steadily decreasing in Portugal, the total number of job accidents continues to be slightly over the 200,000 mark every year (Pordata, 2018). As previously mentioned, workplace accidents do not affect

exclusively those directly involved. There are indirect costs to organizations such as a decrease in productivity or the interruption of a project, among others. In fact, indirect costs have been estimated to be much higher than the direct costs (Lebeau & Duguay, 2013; Rikhardsson, 2004; Schulze, 2014; The American Society of Safety Engineers, 2014; Waehrer, Leigh, Cassady, & Miller, 2004;).

The causal factors of accidents and injuries at the workplace vary. However, the majority of workplace accidents happen due to some human mistake (Hollnagel, 1993; Wiegmann & Shappell, 2003). On top of that, a limited group of workers is at fault for a disproportionally large number of accidents (Lawton & Parker, 1998; Visser, Pijl, Stolk, Neeleman, & Rosmalen, 2007). This suggests some individuals to be more accident-prone than others.

### **Personality traits and counterproductive behavior at work**

As Marcus and Schuler point out (2002), for a behavior to be considered counterproductive it must be a volitional act, potentially and predictably harmful and run counter to legitimate interests of the organization. In this sense it is likely that counterproductive behavior is related to personality because it stems from conscious choices made by the individual (Mount, Ilies, & Johnson, 2006). Despite the range of different behaviors that fall into the definition, studies have shown them to be correlated (Gruys & Sackett, 2003, Sackett & DeVore, 2001). This would suggest, as Gruys and Sackett (2003) pointed out, “that the likelihood of engaging in a certain type of counterproductive behavior increases, the likelihood of engaging in a wide variety of other types of counterproductive behavior also increases” (p. 36). This would, in turn, denote that some individuals are more prone to act out these behaviors than others. It would therefore be in the best interest of organizations to be able to adequately identify who is more prone to engage in CWBs, particularly at the moment of hire. The literature

on CWBs has shown relationships to personality, namely through the Big Five taxonomy, as the most widely accepted method to assess personality traits (Goldberg, 1992; Goldberg & Saucier, 1995; Mount et al., 2006). Research has shown meaningful relationships of counterproductive behavior with the traits of Agreeableness, Conscientiousness and, to a lesser extent, Emotional Stability (Hough, 1992; Hough, Eaton, Dunnette, Kamp, & McClow, 1990; Mount et al., 2006; Ones, 1993; Ones, Viswesvaran, & Schmidt, 1993; Salgado, 2002). A meta-analysis by Berry, Ones, and Sackett (2007) indicated that Agreeableness and Conscientiousness were the strongest predictors of a CWB composite score. Subsequently, results of a study conducted by Bolton, Becker, and Barber (2010) also showed Agreeableness and Conscientiousness as the strongest predictors of CWBs. Incidentally, a meta-analysis by Organ and Ryan (1995) found Conscientiousness as the best personality trait predictor of OCBs. Moreover, other studies have shown a strong relationship between OCBs and CWBs (Bennett & Stamper, 2001; Sackett & DeVore, 2001), albeit other studies have indicated weaker relationships (Dunlop & Lee, 2004; Kelloway, Loughlin, Barling, & Nault, 2002; Sackett, Berry, Wiemann, & Laczko, 2005).

### **Personality traits and safety performance**

Organizations develop rules, procedures, training and proper equipment in order to prevent accidents from occurring. However, such measures only work insofar they are strictly abided by. The extent to which a worker follows the safety-related procedures and norms during job performance can be measured and is understood as safety performance. Unsurprisingly, personality dispositions have been commonly looked at as possible predictors of workplace accidents, namely for filtering out accident-prone candidates during the hiring process. Christian, Bradley, Wallance, and Burke (2009) have found support for a full-mediation model indicating that multiple



individual measures contribute to the prediction of safety performance, subsequently predicting accidents in the workplace. Likewise, Beus, Dhanani and McCord (2014) showed an association between FFM traits and accidents mediated by safety-related behavior, wherein higher levels of Conscientiousness and Agreeableness were associated with fewer unsafe behaviors.

Although some previous meta-analyses have found little evidence of a relationship between personality and accidents (Arthur, Barrett, & Alexander, 1991; Salgado, 2002), research tends to show the Big Five factors Conscientiousness and Agreeableness as predictors of safety-related behavior (e.g. Cellar et al., 2001; Clarke & Robertson, 2008; Foster & Hogan, 2005; Wallace & Vodanovich, 2003).

## **Methodology**

### **Design**

In order to examine possible relationships between counterproductive and safety-related behavior at work with personality traits, responses were taken from two instruments (explained in subtopic Measures): one to measure Dependability and Safety (DSI) and the other to assess personality traits in work settings (WSQ version n). Results from both instruments were then analyzed and explored via correlations and statistical regressions.

### **Study sample**

The data used in this study was collected from a mining company. The data is comprised of results from both the DSI (N=357) and the WSQn (N=376) obtained by applicants to mining jobs. Most of the sample is male (317) and some were omitted

(36). The ages ranged from 18 to 48 years old with a median on 26 years old. The scholarship level of the sample ranged from 4 years of school to master's degree but, the great majority is found up to the 12 years of school (95.3%). It might also be noted that 70.8% had 12 years of schooling and other 18.1% had 9 years.

## **Measures**

### **Dependability and Safety Instrument (DSI) Version 1.1**

The Dependability and Safety Instrument (DSI) Version 1.1 (SHL Group, 2009) is a psychometric test designed to screen out less dependable candidates during the selection process. More specifically, the instrument uses a model to predict customer service and safety outcomes. It was originally inspired from the research of OCBs and CWBs, namely the negative correlation they hold with each other (Berry et al., 2007; Gruys, 1999; Sacket, 2002). An employee or candidate is considered more or less dependable according to his or her likelihood to manifest OCBs (more dependable) and CWBs (less dependable). Dependability is defined as “a set of behaviors related to time keeping, meeting expectations for how to behave in the workplace (e.g. compliance with procedures and organizational policies), getting along with and supporting work colleagues, and coping with the day-to-day challenges that normally occur in the workplace” (Burke, Vaughan, & Ablitt, 2010).

Table 1

*The two faces of four dependable workplace behaviors*

Cluster	Aspect	Behaviors		
Time	OCB	Rarely has time off	Arrives for work on time	Returns from breaks on time
Keeping	CWB	Frequently has time off	Frequently late for work	Often returns from breaks late
Meeting Expectations	OCB	Sticks to company regulations	Checks his/her work for mistakes	
	CWB	Does not stick to company regulations	Does not check his/her work for mistakes	
Working with others	OCB	Rarely has disagreements with colleagues	Keeps an even temper in most situations	
	CWB	Often has disagreements with colleagues	Rarely keeps an even temper	
Coping with pressure	OCB	Is confident about his/her own abilities	Handles stressful situations well	Can handle situations of conflict well
	CWB	Lacks confidence in his/her own abilities	Does not handle stressful situations well	Does not handle situations of conflict well

*Note.* Taken from Dependability and Safety Instrument (DSI) Version 1.1, Technical Manual (Burke, Vaughan, & Ablitt, 2010).

Validation studies on the DSI have been conducted on 898 employees, since 2004, in various organizational settings and roles. Exploratory maximum likelihood factor analysis has showed a four factor oblique model to offer an adequate fit to data on 10 Likert-style items (Burke et al., 2010), as shown in Table 2.

Table 2

*Inter-correlations between dependability clusters*

Cluster	Time Keeping (TK)	Meeting Expectations (ME)	Working with Others (WWO)	Coping with Pressure (CWP)
TK	0.74	0.70	0.32	0.33
ME		0.75	0.41	0.55
WWO			0.76	0.52
CWP				0.79

As the correlations between the four clusters in the table above show, all behaviors included in the SHL's definition of dependability are correlated (with an average of 0.47), as expected from the co-occurrence view of CWBs, and the internal consistency reliability of the sum of all dependability scales summarized in Table 1 is 0.84 (N=898; Burke et al., 2010).

The test is comprised of 18 statement pairs, each of which contains both either a positive or negative predictor of dependability, and a distractor statement, i.e. not hypothesized as a predictor of personality. The statements in each pair were matched to be equally desirable for respondents, and the response format was designed to be a quasi ipsative or forced structure in which they are asked to choose one of the statements according to which they identify with the most. They can also indicate that neither is like them, or that they are both equally applicable. Following the sum of the scores on each cluster, the final result is placed under one of five score bands from "low risk" to "very high risk".

## **Work Styles Questionnaire (WSQ version n)**

The Work Styles Questionnaire version n (WSQn) is a personality assessment instrument that identifies working preferences, or styles. It was originally developed in 1988 and drew from SHL's "Factor Extended" model of personality. The questionnaire was planned and developed as a response to the increasing necessity of organizations to select the right people for the manufacturing industry, as well as distribution and transportation. In this sense, the response format and language used were specifically designed to be accessible to a population with lower levels of education. The validity of the first version of the WSQ was quickly established with solid confirmatory data being collected from a motor manufacturer and a food manufacturer (SHL Group, 1999).

Information collected from numerous job analyzes was gathered and explored to understand what characteristics better predict success in the manufacturer sector, and form an integrated competency model. At an early stage, the competency model was comprised of four areas, "working with people", "working with information", "personal qualities", and "technical qualities". There have been changes to the WSQ since then, namely the collapsing of over-lapping scales, redefinition of the content of other scales and the addition of two new scales, Practical and Dependable.

The current WSQ (version n) uses a normative measurement that consists of a five-point Likert-scale and 144 statements. Based on the ratings given, their preference or style is measured in stens (standardized tens) on each of eighteen scales. It is comprised of 18 different scales grouped under 5 areas. These areas and scales are illustrated on the table shown on the next page (SHL Group, 1999). The scales descriptions can be found in Annex.

Table 3

*Scales of the WSQ (version n)*

<b>Area</b>	<b>Scale</b>
Relationships with people	Assertive
	Socially confident
	Team oriented
	Considerate
Thinking style	Practical
	Innovative
	Adaptable
	Forward thinking
	Detail conscious
Feelings	Resilient
	Emotionally controlled
	Optimistic
Energies	Active
	Competitive
	Achieving
	Decisive
Compliance	Dependable
	Social desirability

## **Procedure**

The results were collected to explore possible relationships between the WSQn scales and the DSI. In order to achieve this, some statistical techniques were used. The variables were first centered and then correlated using the Pearson correlation coefficient. The variables correlated ( $p < 0.05$ ) were subsequently entered in Multiple Linear Regressions. Lastly, different models were created with resort to Multiple Sequential Regressions.

## **Hypotheses**

In view of the fact the DSI is measuring dependability, a positive relation between the DSI scores and the Dependable scale of the WSQn is expected.

- H1: The Dependable scale of the WSQn is a strong predictor of DSI scores.

Previous research has shown Agreeableness and Conscientiousness as the Big Five strongest predictor traits of counterproductive work behavior (negative correlation) (Berry et al, 2007; Bolton et al, 2010; Salgado, 2002). In this sense, the scales Considerate and Socially Confident, associated with the WSQn factor close to Agreeableness of the Big Five (SHL Group, 1999) are expected to be associated with DSI Scores. The scale Team Oriented was also associated with this factor, however, this scale is more closely related with extraversion rather than Agreeableness.

- H2: The scales Considerate and Socially Confident are positively associated with DSI scores.

More specifically, the Considerate scale might have a stronger relationship with DSI scores than the others above mentioned. Theoretically, it appears intuitive that those who score high on the considerate scale i.e. people generally more concerned with the well-being of those around them, would be less prone to engage in counterproductive and unsafe work behaviors. Moreover, the Considerate scale is also associated with a WSQn factor similar to Conscientiousness (SHL Group, 1999).

- H3: The Considerate scale of the WSQn has a stronger association with DSI Scores than the others of the Relationships with People domain.

In the same vein, the scales Detail Conscious and Forward Thinking are heavily associated with the above mentioned factor similar to Conscientiousness. It would indeed be expected that those who do things haphazardly or unmethodically would be more prone to get involved in accidents at the workplace. Conversely, those who tend to be more thorough and tidy about their work and surroundings and, those who are more organized and plan ahead, would leave less room for mistakes and lapses from occurring.

- H4: The Detail Conscious and Forward Thinking scales of the WSQN are positively associated with DSI scores.

Individuals that manifest a tendency to be creative and ambitious, to try new ways of doing things and prefer difficult tasks and challenges may struggle to repeatedly follow through routine tasks. However, taking into consideration the nature and purpose of safety regulations and procedures, they require strict compliance from workers. Therefore, those who struggle with the repetitiousness of the procedures would be more inclined to bypass or neglect them and, as a result, become more accident-prone.



- H5: The Innovative and Achieving scales of the WSQn are negatively associated with the DSI scores.

## Results

### Predictors of Dependability and Safety

The WSQ (version n) scales that were significantly correlated with the criterion variable, DSI Scores (see Table 4), were entered as predictors into a multiple regression using the standard method. A significant model emerged:  $F(13,341) = 4.473$ ,  $p < .001$ . The model explains 11.3% of the variance in DSI Scores (adjusted  $R^2 = .113$ ). Table 5 gives information about regression coefficients for the predictor variables entered into the model. Socially Confident and Dependable were significant predictors, with a positive relationship to DSI Scores. Innovative and Achieving were significant predictors, with a negative relationship to DSI Scores.

Table 4

*Correlations between WSQ (version n) Scales and DSI Scores*

<b>WSQ (version n) Scales</b>	<b>DSI Scores (PCC)</b>	<b>Sig. (2-tailed)</b>
Assertive	.003	.951
Socially Confident	.134	<0.05
Team Oriented	.167	<0.01
Considerate	.092	.084
Practical	-.003	.956
Innovative	-.121	<0.05
Adaptable	-.081	.129
Forward Thinking	.189	<0.01
Detail Conscious	.147	<0.01
Resilient	.172	<0.01
Emotionally Controlled	.058	.274

(Continued)

Table 4

*Correlations between WSQ (version n) Scales and DSI Scores (cont.)*

Optimistic	.121	<0.05
Active	.140	<0.01
Competitive	-.129	<0.05
Achieving	-.151	<0.01
Decisive	-.142	<0.01
Dependable	.227	<0.01
Social Desirability	.173	<0.01

Table 5

*Multiple Standard Regressions for WSQ Scales correlated with DSI Scores.  
Standardized regression coefficients for the variables inserted in the model.*

<b>Predictors</b>	<b>B</b>	<b>Standard Error (B)</b>	<b><math>\beta</math></b>	<b><i>p</i> (bilateral)</b>
Socially Confident	.010	.005	.120	<0.05
Team Oriented	.008	.007	.070	.207
Innovative	-.016	.008	-.128	<0.05
Forward Thinking	.015	.013	.091	.226
Detail Conscious	.005	.014	.030	.705
Resilient	.011	.008	.082	.203
Optimistic	-.011	.011	-.078	.309
Active	.008	.008	.060	.317
Competitive	-.002	.005	-.018	.780
Achieving	-.021	.008	-.174	<0.01
Decisive	-.006	.008	-.041	.457
Dependable	.021	.010	.143	<0.05
Social Desirability	.001	.008	.005	.944

Note. Dependent Variable: DSI Scores.

### Sequential Regressions

The DSI has shown relationships with Big Five personality traits. In terms of customer service, employees who score higher are seen as more conscientious and agreeable. In terms of safety, more accident prone employees are seen as less conscientious, less agreeable and less emotionally stable (Burke et al., 2010). These

results are in agreement with a vast number of studies on the subject of personality that link these traits with counterproductive work behavior and safety performance (e.g. Mount et al., 2006; Ones et al, 1993; Salgado, 2002). In this sense it becomes relevant to examine if altering the order of the predictors according to how they relate with DSI Scores (Conscientiousness, Agreeableness and Emotionally Stability), increases predictability of the DSI Scores.

A factor analysis on the WSQn extracted five factors similar, but not identical, to the five factors of the Five Factor Model of personality. Dependable was strongly related to a factor similar to Conscientiousness. Achieving was also related to Conscientiousness. Socially Confident was related to a factor seemingly equivalent to Agreeableness. Innovative was related to a factor that appears to combine both Extroversion and Openness to Change. Emotional Stability was not related to any of the four predictors.

Considering that Conscientiousness and Agreeableness are the strongest trait predictors of counterproductive behavior (e.g. Berry et al, 2007; Bolton et al, 2010; Salgado, 2002), the DSI predictors related to both these traits were first taken into account and a sequential linear regression was done to form five different models: the 1<sup>st</sup> model consisted only of the Dependable scale of the WSQn, since it is theoretically the most related to the DSI and heavily related to Conscientiousness; the 2<sup>nd</sup> model included the other Conscientiousness-related scale, Achieving; the 3<sup>rd</sup> model added the Socially Confident scale, related to Agreeableness; the 4<sup>th</sup> model included the fourth predictor of the DSI Score, Innovative; lastly, the 5<sup>th</sup> model contained all correlated scales.

Table 6

*Sequential Multiple Regression for WSQ Scales correlated with DSI Scores. Anova*

<b>Model</b>		<b>Sum of Squares</b>	<b>DF</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	5.305	1	5.305	19.092	.000
	Residual	98.092	353	.278		
	Total	103.397	354			
2	Regression	8.979	2	4.490	16.738	.000
	Residual	94.418	352	.268		
	Total	103.397	354			
3	Regression	10.310	3	3.437	12.959	.000
	Residual	93.087	351	.265		
	Total	103.397	354			
4	Regression	11.969	4	2.992	11.455	.000
	Residual	91.428	350	.261		
	Total	103.397	354			
5	Regression	15.065	13	1.159	4.473	.000
	Residual	88.333	341	.259		
	Total	103.397	354			

Table 7

*Sequential Multiple Regression for WSQ Scales correlated with DSI Scores. Model summary*

<b>Model</b>	<b>Adjusted R-Squared</b>	<b>R-Squared Change</b>	<b>F Change</b>	<b>Sig. F Change</b>
1	.049	.051	19.092	.000
2	.082	.036	13.697	.000
3	.092	.013	5.019	.026
4	.106	.016	6.351	.012
5	.113	.030	1.328	.221

As results show (see tables 6 and 7) Model 1, with Dependable as the only predictor, explained 4.9% of variance and was significant ( $F(1,353) = 19.092, p < .001$ ). Model 2, in which scale Achieving was added, explained significantly more variance ( $R^2\text{change} = .036, F(2,352) = 16.738, p < 0.001$ ). Model 3, in which scale Socially Confident was added, explained significantly more variance ( $R^2\text{change} = .013, F(3,351)$

= 12.959,  $p < 0.001$ ). Model 4, in which scale Innovative was added, explained significantly more variance ( $R^2_{\text{change}} = .016$ ,  $F(4,350) = 11.455$ ,  $p < 0.001$ ). Model 5 includes all correlated scales and is the model derived from standard multiple regressions (see table 5). It explains significantly more variance ( $R^2_{\text{change}} = .030$ ,  $F(13,341) = 4.473$ ,  $p < 0.001$ ).

## **Discussion**

Taken as a whole these results (model 5, tables 6 and 7) indicate the WSQn scales hold some predictive value over DSI scores. The Dependable and Socially Confident scales, as expected, were significantly and positively related with DSI scores (Hypothesis 1 confirmed, and Hypothesis 2 partially confirmed). Likewise, the Innovative and Achieving scales were significantly and negative related with DSI scores (Hypothesis 5 confirmed). On the other hand, the scales Considerate, Detail Conscious and Forward Thinking did not show a significant relationship (Hypothesis 3 and 4 not confirmed). One possible reason is the fact the sample was taken from workers who had already undergone a process of selection, by which individuals who were less considerate might have been filtered out. The same would apply for those who did not appear to be rigorous, methodical and organized enough.

## **Limitations and further research**

The data was collected from a homogeneous group of applicants to mining jobs for the same company in terms of sex, age and level of scholarship. Therefore, the sample is not representative of the population and the results are not generalizable. Another possible limitation is the lack of statistical correctors used to adjust the

restriction of the sample range. There are not many previous studies on the relationship between DSI scores and WSQ (version n) scales to compare with. In this sense, this study may be of value to future research on the relationship between these two instruments. The potential of the WSQ (version n) to predict dependability and safety-related behavior is something to consider given the impact these have on both organizations and employees and how the WSQ (version n) could make the assessment of employees and candidates more economical, accessible and spread through organizations.

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## Appendix

### *WSQ (version n) Scale Descriptions (SHL Group, 1999)*

<b>Relationships with People</b>	
<p><b>Assertive</b></p> <p>The Assertive scale is concerned with the extent to which individuals enjoy influencing, directing and convincing others. A typical positive loading item is “I like being in charge”, while a typical negative loading item is “I dislike telling others what to do”.</p>	<p><b>Socially Confident</b></p> <p>The Socially Confident scale is concerned with how talkative, lively and self-assured an individual is in company. A typical positive loading item is “I feel comfortable in formal situations” and a typical negative loading item is “I feel slightly awkward meeting new people”.</p>
<p><b>High Sten Scorers</b></p> <p>usually like to make decisions for the group, put suggestions forward and take charge. They like to direct, manage and organize others. People may look to them when solutions need to be found. They enjoy influencing the outcome of discussions and persuading others to their point of view. Whilst others may defer to them, they may come over as autocratic, and possibly find it difficult to compromise or delegate.</p>	<p><b>High Sten Scorers</b></p> <p>are generally easy mixers and confident that they will make a good impression when meeting new people. They usually feel at ease in meetings or when hosting social events and are comfortable if asked to give a short talk or presentation. They tend to be confident and know what to say, although they may come over a little overpowering or brash to others.</p>
<p><b>Low Sten Scorers</b></p> <p>tend to contribute less to group activities, are often reluctant to put forward suggestions when decisions need to be made and generally dislike taking the lead in a group. They prefer not to give instructions or direct the work of other people. They tend not to enjoy negotiating or persuading people to their point of view, and are likely to be co-operative, indeed compliant, when working in a team.</p>	<p><b>Low Sten Scorers</b></p> <p>are often comfortable when meeting new people, and tend to dislike making conversation with people they don’t know. They would probably feel uncomfortable if asked to give a presentation, and are generally more easily embarrassed. They tend to be reserved, unassuming, and seldom seek the limelight. They may be somewhat self-conscious and shy, usually preferring to stay in the background.</p>

(continued)

<b>Relationships with People</b>	
<p><b>Team Orientated</b></p> <p>The team Orientated scale is concerned with an individual's preference for working in a team or group compared to working alone. A typical positive loading item is "I prefer to work with other people", while a typical negative loading item is "I work better on my own".</p>	<p><b>Considerate</b></p> <p>The Considerate scale is concerned with the extent to which the individual is concerned about the welfare, problems or circumstances of others. A typical positive loading item is "I always enjoy helping colleagues with their work", while a typical negative loading one is "I am not always interested in the welfare of others".</p>
<p><b>High Sten Scorers</b></p> <p>prefer to work with others and like to participate in group activities. They enjoy collaborating with, and working alongside their colleagues. They are likely to feel somewhat isolated if deprived of regular contact with fellow workers, and generally feel happier working as part of a team.</p>	<p><b>High Sten Scorers</b></p> <p>are generally interested in the welfare of others and enjoy helping people with their problems. They tend to be sensitive to other's needs and circumstances. Usually patient and sympathetic when dealing with colleagues, they try to avoid taking any action that may affect others adversely.</p>
<p><b>Low Sten Scorers</b></p> <p>prefer to work mostly on their own. They may feel de-motivated and distracted if expected to work closely with others on a regular basis. They are likely to say that they work better on their own and enjoy having responsibility for their own work. They do not feel happy working as part of a team.</p>	<p><b>Low Sten Scorers</b></p> <p>tend to be a little insensitive and possibly unsympathetic towards others, believing that people should sort out their own problems. They may be intolerant and unlikely to put themselves out to help a colleague. They have less regard for the circumstances or feelings of others and may appear aloof and uncaring.</p>

(continued)

Thinking Style	
<p><b>Practical</b></p> <p>The Practical scale is concerned with the degree to which individuals enjoy using their hands, say in mending, repairing or constructing things. A typical positive loading item is “I enjoy making things” and a typical negative item is “I am not particularly good with my hands”.</p>	<p><b>Innovative</b></p> <p>The Innovative scale is concerned with how imaginative, novel or creative an individual feels he or she is. A typical positive loading item is “I generally have lots of ideas” and a typical negative loading item is “I am not really known for my ingenuity”.</p>
<p><b>High Sten Scorers</b></p> <p>enjoy repairing or making things and take an interest in mechanical or constructional matters, together with the practical aspects of how things work. They like to fix things when they go wrong, rather than get someone else to do it, and generally enjoy a “hands-on” approach.</p>	<p><b>High Sten Scorers</b></p> <p>see themselves as being inventive, able to generate lots of ideas and think up new ways of doing things. They tend to come up with more unusual suggestions and enjoy experimenting with new approaches.</p>
<p><b>Low Sten Scorers</b></p> <p>usually prefer to leave essential repairs to others and to avoid doing practical work. They tend to be disinterested in how things work or why they may fail to function correctly. They tend to have little interest in the build or construction of things and will distance themselves from tasks which require mechanical assembly.</p>	<p><b>Low Sten Scorers</b></p> <p>see themselves as not having many original or new ideas to offer and tend to adopt straightforward and rather predictable solutions to problems. They tend to think about things in terms of existing perspectives or frameworks, and may prefer common sense ideas rather than more ingenious alternatives.</p>

(continued)

Thinking Style	
<p><b>Adaptable</b></p> <p>The Adaptable scale is concerned with the degree to which an individual is open to new approaches, and enjoys, and usually welcomes change. A typical positive loading item is “I enjoy trying our new things”, and a typical negative loading item is “I tend to stick to the tried and tested”.</p>	<p><b>Forward Thinking</b></p> <p>The Forward Thinking scale is concerned with how forward thinking and structured individuals are, and the extent to which they anticipate and plan ahead. A typical positive loading item is “I always plan my work carefully before I begin”, while a typical negative loading item is “I am not very good at preparing things in advance”.</p>
<p><b>High Sten Scorers</b></p> <p>are willing and happy to try out new approaches and tend to adapt readily to changes in circumstances or working procedures. They enjoy variety and change, and may become bored or frustrated if subjected to too much routine. They may potentially be distracted from the task at hand, however.</p>	<p><b>High Sten Scorers</b></p> <p>like to have clearly defined objectives and targets before they start to work. They like to decide priorities, arrange schedules, and value planning for its own sake. They tend to be prepared for most eventualities and to plan their work. They are generally attracted to well-structured activities and maybe somewhat inflexible.</p>
<p><b>Low Sten Scorers</b></p> <p>generally like to take the established or tried and trusted approach or use conventional methods. They are likely to cope well with routine and have little interest in pioneering new or radical techniques. They may find constant changes to their working practices or environment rather unsettling,</p>	<p><b>Low Sten Scorers</b></p> <p>tend to deal with problems as they arise and adapt plans as they go along. They may be more efficient at carrying out projects than planning them. They believe too much time is often spent on planning and organizing, and generally avoid doing too much preparation in advance.</p>

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<b>Thinking Style</b>
<b>Detail Conscious</b> The Detail Conscious scale is concerned with how tidy, precise and thorough individuals are in relation to their work and their surroundings. A typical positive loading item is “I like to get every detail right”, while a typical negative loading item is “People would say my work is a little untidy”.
<b>High Sten Scorers</b> will usually be happy to undertake tasks requiring accuracy and precision and are likely to keep their workplace tidy with everything in its proper place. They tend to be meticulous over detail and systematic in their approach. They are likely to be thorough and tidy-minded, but may be over-fussy or over-particular about small details.
<b>Low Sten Scorers</b> are not particularly meticulous or tidy and prefer not to be held responsible for getting all the details correct. They tend not to check work thoroughly and may not pick up errors or omissions. They will generally feel happier working with the general rather than the specific.

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Feelings	
<p><b>Resilient</b></p> <p>The Resilient scale is concerned with the extent to which an individual is calm, unworried, and not easily hurt or upset by criticism. A typical positive loading item is “I don’t let people upset me” and a typical negative loading one is “I am quite sensitive to criticism”.</p>	<p><b>Emotionally Controlled</b></p> <p>The Emotionally Controlled scale is concerned with the degree to which an individual is open or restrained in the expression of their emotions or feelings. A typical positive loading item is “I usually keep my emotions to myself” and a typical negative loading item is “People normally know just how I am feeling”.</p>
<p><b>High Sten Scorers</b></p> <p>are generally less prone to anxiety, tend not to worry unduly and usually take stressful situations in their stride. They tend not to suffer from hurt feelings and are not particularly bothered of what others think of them. They are good at brushing off insults and are not easily upset.</p>	<p><b>High Sten Scorers</b></p> <p>are generally more controlled in expressing their emotions or feelings, typically curbing their temper or being more likely to exercise restraint in the expression of their true feelings. They usually manage to avoid outbursts but may also suppress more positive feelings and be harder to read.</p>
<p><b>Low Sten Scorers</b></p> <p>are generally more anxious, unrelaxed, and tend to be apprehensive about future events. They may worry about things going wrong, and become tense as deadlines approach. They tend to be sensitive, often affected by criticism, and are easily upset or offended by others.</p>	<p><b>Low Sten Scorers</b></p> <p>are usually more prone to showing their feelings, whether they be positive or negative. They may have emotional outbursts, show their irritation and be too eager to tell people exactly how they feel. They tend to be easy to read and to give away their feelings.</p>

(continued)

<b>Feelings</b>
<b>Optimistic</b> The Optimistic scale is concerned with an individual's perspective on their situation and circumstances. In particular the balance between being more cheerful and positive and more resigned and negative. A typical positive loading item is "Few things really get me down" and a typical negative loading one is "I get depressed easily".
<b>High Sten Scorers</b> tend to be optimistic in outlook and to remain cheerful even when things go wrong. They generally feel positive about most situations and usually expect things to improve. They rarely get downhearted or feel depressed. They tend to be hopeful about the future but may be too accepting or uncritical. Others could describe them as naive.
<b>Low Sten Scorers</b> tend to anticipate the worst outcomes, focus on disadvantages rather than advantages and, in times of difficulty, expect things to get even worse. They are inclined to feel depressed and may find many things to complain about. Others may describe them as cynics, or possibly negative or discontented. They may be skeptical or suspicious, but describe themselves as realists.

(continued)

<b>Energies</b>	
<p><b>Active</b></p> <p>The Active scale is concerned with an individual's energy and stamina and also their preference for high levels of activity and a higher pace of work. A typical positive loading item is "I have lots of stamina" and a typical negative loading item is "A day's work tires me out".</p>	<p><b>Competitive</b></p> <p>The Competitive scale is concerned with the extent to which individuals enjoy winning, beating others and getting the better of people in a range of activities. A typical positive loading item is "I always play to win", while a typical negative loading item is "Losing doesn't bother me".</p>
<p><b>High Sten Scorers</b></p> <p>prefer to keep busy and enjoy being involved in tasks requiring lots of energy. Even at the end of hectic working day they will generally find the energy for other pursuits. They are usually active and on the go, but may become restless if denied an outlet for their surplus energy.</p>	<p><b>High Sten Scorers</b></p> <p>play to win, enjoy overcoming the opposition and are usually determined to beat others. They generally participate for the competition rather than taking part. They are likely to identify the competitive element in a situation, enjoy putting up a fight and are both to accept defeat.</p>
<p><b>Low Sten Scorers</b></p> <p>avoid activities requiring lots of energy or stamina. They prefer to work at a leisurely pace and like to rest after periods of extended activity. They may tire easily and tend to avoid tasks requiring reserves of energy or strenuous effort.</p>	<p><b>Low Sten Scorers</b></p> <p>are usually satisfied with participating in events are are not obsessed with winning. They are not likely to feel the need to get the better of other people and tend to be good losers. They are often prepared to concede in a contest rather than force themselves over others.</p>

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<b>Energies</b>	
<p><b>Achieving</b></p> <p>The Achieving scale is concerned with how high individuals set their personal goals and targets, how much they are stimulated by challenge and career progression and how keen they are to improve their own performance. A typical positive loading item is “I like to succeed in everything I do” and a typical negative loading item is “I prefer to set myself realistic rather than difficult targets”.</p>	<p><b>Decisive</b></p> <p>The Decisive scale is concerned with the extent to which individuals make quick decisions or reach rapid conclusions about various situations or problems. It is much more concerned about the speed of decision-making, rather than about its quality. A typical positive loading item is “I make up my mind quickly”, while a typical negative loading item is “I prefer to take my time summing up a situation”.</p>
<p><b>High Sten Scorers</b></p> <p>generally enjoy setting and achieving difficult targets, tend to set their career sights high and may place these over family and social commitments. They are keen on success and prefer to strive for rapid promotion rather than settle for secure or congenial work. They will often accept difficult targets even when this implies a fair risk of failure.</p>	<p><b>High Sten Scorers</b></p> <p>rarely hesitate before making a decision, and tend to believe that quick decision making is a positive trait. They are likely to assess situations quickly and to take immediate action if necessary. Their decisions may be seen as risky, they tend to be impulsive and impatient, and they may jump to conclusions.</p>
<p><b>Low Sten Scorers</b></p> <p>tend not to set their sights too high, and probably prefer a secure but less well paid job to one involving risk or discomfort. They are likely to place their family and social life above their personal career ambitions. They could not be described as ambitious or hungry for success and do not generally enjoy being set difficult or challenging targets.</p>	<p><b>Low Sten Scorers</b></p> <p>usually prefer to think through carefully, and to reserve their judgment. They tend to hesitate before deciding between different courses of action, generally preferring to weigh up all the facts and opinions before committing themselves to action. They tend to exercise caution, believing that hasty decisions may lead to mistakes.</p>

(continued)

<b>Compliance</b>	
<p><b>Dependable</b></p> <p>The Dependable scale is concerned with how hard-working, conscientious and reliable an individual describes themselves as being, and also how respectful they are an authority. A typical positive loading item is “People would describe me as completely reliable” and a typical negative loading item is “I sometimes like to ‘bend the rules’”.</p>	<p><b>Social Desirability</b></p> <p>The Social Desirability scale looks at the extent to which individuals have been concerned about presenting a positive self-image of themselves to others. A typical positive loading item is “I never say things which I regret later” and a typical negative loading item is “I am sometimes impatient with people”.</p>
<p><b>High Sten Scorers</b></p> <p>tend to be reliable and trustworthy, and generally follow company policies and procedures with little questioning. They are likely to be seen as conscientious and committed to their work. They describe themselves as persevering even with repetitive or less interesting tasks, and as usually punctual and unlikely to take time off work without good cause.</p>	<p><b>High Sten Scorers</b></p> <p>show an uncritical response pattern about themselves and a tendency to be overly positive and perhaps for their scores to be falsely inflated. People with this scoring pattern can have a strong desire to please others, an over-positive self-image or feel a high degree of self esteem.</p>
<p><b>Low Sten Scorers</b></p> <p>are more likely to cut corners or bend the rules in their day to day activities at work. They may not be as conscientious as their colleagues and may arrive late for work or take time off occasionally without good reason. Although not so overtly committed or loyal to the company, and generally seen as less reliable, they may still be quite capable.</p>	<p><b>Low Sten Scorers</b></p> <p>indicate a rather self critical attitude and a tendency to be overly negative about their behavior. This may imply an indifference to the normal social niceties or a lack of self-confidence or self belief.</p>